

2021

MoDOT RESULTS

Safety. Service. Stability.



Missouri Department of Transportation



www.modot.org/results



MoDOT RESULTS

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“We work hard to deliver quality transportation projects every day.”

SAFETY

Be Safe

Be Accountable

SERVICE

Be Respectful
Be Inclusive

Be Bold

Be Better

STABILITY

Be One Team
So we can be a
great organization

MoDOT Delivers Results

The Missouri Department of Transportation is mission-centered. By focusing on customers and providing transparent measures of our progress, MoDOT delivers results through accountability, innovation and efficiency.

We have developed a system of performance metrics to deliver results while being good stewards of the state's transportation dollars.

Since 2007, MoDOT has documented more than **\$5.4 billion** in one-time or ongoing savings. This includes redirection of \$97 million in efficiency savings in 2021 to roads and bridges and \$830 million in savings to our customers. In the last 14 years, reinvestment in safety enhancements resulted in an estimated 863 lives saved.

MoDOT is not afraid to make tough decisions. In 2011, we responded to Missouri's critical infrastructure needs by enacting the Bolder Five-Year direction, a plan that reduced 124 facilities, 750 pieces of equipment and 1,200 employees. Over a decade later, these actions have saved **\$1.2 billion**.

During FY2021, early reports showed fuel revenue dropping across the state as a result of the COVID-19 pandemic. Because of this, MoDOT took aggressive actions to reduce spending, including temporarily reducing employee work hours and/or salaries using the Shared Work program. This kept MoDOT on budget with little impact to Missouri citizens.

MoDOT continues to re-examine all its activities from the delivery of projects for roads and bridges to daily operations. We are moving some of these savings into our daily operations and internal budgets to have the necessary resources and skilled, experienced employees available to meet more customer expectations.

MoDOT's core values of safety, service and stability serve as our foundational pillars. MoDOT is committed to providing a safe, innovative and reliable transportation system, which is essential to Missouri's economic growth.



SAFETY

Work Zone Safety and Innovation

For the second consecutive year, Missouri has seen a record number of crashes involving work zone buffer trucks. Truck/trailer mounted attenuators (TMAs) are protective vehicles with a message board and lights and serve as a warning to traffic approaching a moving work zone. In the summer of 2021, MoDOT had already seen more crashes involving TMAs than it had in all of 2020.

Since 2018, TMA crashes have resulted in dozens of injuries and one fatality. These crashes are almost always the result of a driver not paying attention and/or driving too fast for conditions.



This year, MoDOT partnered with the Missouri State Highway Patrol for **OPERATION PROTECT** to actively enforce speed limits and reduce distracted driving in some of the state's top work zones throughout the construction season.

MoDOT also expanded the use of real-time digital alerts, previously piloted on emergency response trucks, to more than 500 vehicles, including several mobile operation trucks. This technology enables MoDOT vehicles with flashing lights to send alerts to motorists through tools such as the WAZE navigation app, giving drivers early warnings on approaching work zones.

The department continued its use of temporary rumble strips and advanced warnings on dynamic message signs as additional tools alerting drivers to the upcoming work.

Addressing Missouri's Unbuckled Fatalities



Seat belt usage in Missouri continues to be a challenge. A recent survey revealed 88% of Missouri motorists are buckling up, an increase from the previous year's 86% and matching the highest rate Missouri has ever recorded. But the unbuckled 12% make up a majority of the state's roadway fatalities, which spiked in 2020 despite a decrease in traffic volume. More than two-thirds of the drivers and passengers killed in traffic crashes last year were not wearing a seat belt.

"The Buckle Up Phone Down program helps us reinforce the two easiest and most effective ways to stay safe and save lives on our highways," said Nicole Hood, state highway safety and traffic engineer. "Statewide, we've surpassed 14,000 participants in the BUPD challenge, and the momentum is picking up across the country."

Since the program began in 2017, the BUPD initiative has spread steadily across Missouri and into more than a dozen other states, including Wisconsin, Massachusetts, Kentucky, Nevada and others.

RESULTS



SAVING LIVES

KEEPING ALL TRAVELERS SAFE

\$1.5 Billion in Safety Benefits, 130 Lives Saved

The Smooth Roads Initiative and Better Roads, Brighter Future programs were back-to-back efforts that improved 5,600 miles of highways. Completed earlier than scheduled, the efforts delivered smoother pavement, brighter striping, rumble stripes and other safety improvements to the highways that carry 80% of Missouri's traffic. These improvements have resulted in more than **\$1.5 billion** of safety benefits to customers since 2007.



SAFER ROADS

SAFETY COMMITMENT

\$6.6 Billion in Total Customer Savings, 611 Lives Saved

In the spirit of improving safety on every Missouri road, MoDOT has provided treatments on roadways to address "run-off-the-road" crashes. By installing thousands of miles of shoulders and rumble strips on rural highways, MoDOT has reduced severe crashes by 30%. Guard cable is used on portions of interstates and other major routes, drastically reducing the number of median crossover crashes, which are often fatal. Also, high-grip surface treatments have achieved a 20% reduction in run-off-the-road crashes and help hold vehicles in the driving lanes. Electronic truck screening allows prequalified trucks to safely bypass weigh stations.



SAFER DESIGN CONCEPTS

STATE-OF-THE-ART DESIGN

\$685 Million in Total MoDOT Savings, 83 Lives Saved

The Diverging Diamond Interchange (DDI), first used in Springfield, Mo., in 2009, solves major traffic and safety issues at a much lower cost than traditional interchange designs. Missouri now has 25 DDIs. Many other states have followed suit, with at least one DDI of their own. J-Turns are a cost-effective alternative to an overpass on four-lane highways and reduce the number and severity of crashes. At locations where J-Turns are installed, crashes are down 25% and there are **88% fewer fatalities**. Missouri also uses shared four-lane highways that feature alternating passing lanes to give motorists periodic opportunities to pass without pulling into the opposing lane.



PUBLIC SAFETY

DISTRIBUTION OF FACE COVERINGS TO TRANSIT AGENCIES

More than 25,000 Distributed Statewide

MoDOT Multimodal Division, with the assistance of General Services distribution staff, provided 25,500 cloth face coverings to more than 80 transit agencies in Missouri. The face coverings were provided by FTA through FEMA at no cost to MoDOT. However, the protection provided by use of the face coverings played a key safety role in the transit pandemic response.

SERVICE

MoDOT Administers COVID Relief Money to Other Modes

The Missouri Department of Transportation helped administer COVID-19 relief funds during FY 2021 to projects supporting non-highway transportation modes.

More than **\$3.6 million** of those funds supported Missouri River Runner passenger rail during FY 2021. Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) money led the way with \$2.56 million utilized during this period. The Coronavirus Aid, Recovery and Economic Security (CARES) Act supplied \$668,000, and American Rescue Plan Act (ARPA) funds totaled \$421,000 during the same period.

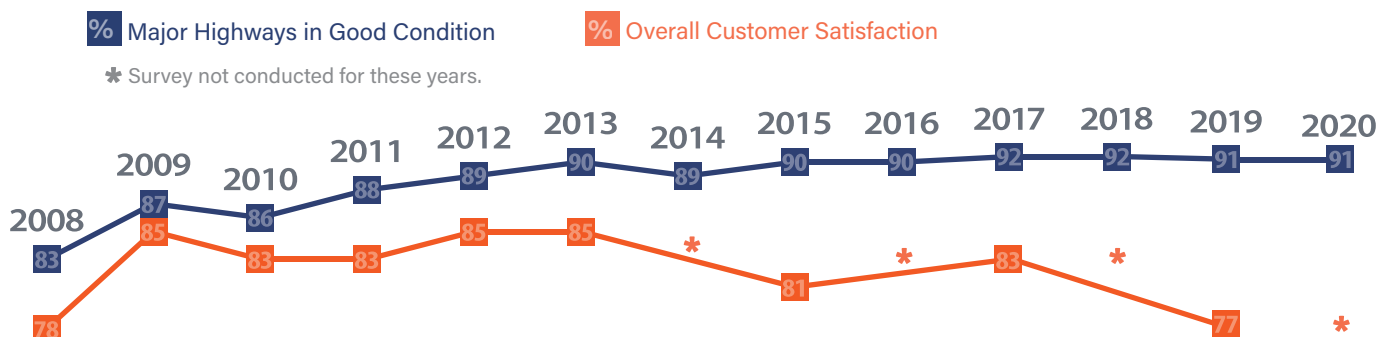
The department's transit division administered CARES, CRRSAA and ARPA funds for rural public transportation, Rural Transportation Assistance Program, and Intercity Bus. These funds were also used to enhance the mobility of seniors and individuals with disabilities who have limited access to their communities (medical, employment, shopping, etc.). These funds have helped areas where public transportation is unavailable or insufficient.

CARES Act supplied rural public transportation with \$61.8 million; CRRSAA supplied specialized services to seniors and individuals with disabilities with more than \$850,000; and ARPA supplied rural public transportation, intercity bus service, Rural Transportation Assistance Program and Enhanced Mobility of Seniors and Individuals with Disabilities program with \$12.9 million.

The department's aviation division also helped administer funds. MoDOT received \$2.6 million in CARES Act funding, and it has already reimbursed \$1.5 million to airports to fund an assortment of needs. The CARES Act funds supported airport supplies and materials, insurance, local match funds for Airport Improvement Program grants, salaries and fuel.

MoDOT is administering CARES Act funding for 68 airports. CRRSAA funding of \$954,324 and ARPA funding of \$2.2 million is also being administered by MoDOT for 65 airports. With such a vast network of aviation facilities — many of which are in rural communities — CARES Act funding is providing a much-needed lifeline during the pandemic.

Road Condition and Customer Satisfaction



“Having goals isn’t enough. With the help of our partners, we continuously improve our performance and hold ourselves accountable to our customers.”

RESULTS



PRACTICAL OPERATIONS

CUSTOMER PRIORITIES

\$436 Million in Total MoDOT Savings

MoDOT has saved \$436 million since 2007 by adjusting mowing and striping schedules, using innovative materials and equipment to fight ice and snow, re-evaluating our snow route priorities and using incarcerated crews. These savings have been redirected back into improving the conditions of Missouri's roads and bridges.



ECONOMIC DEVELOPMENT

DBE PROGRAM EXPANDS OPPORTUNITIES

\$7.7 Million in Additional Funds

MoDOT uses Federal Highway Administration funds to administer programs that expand business opportunities for historically disadvantaged groups. By educating business owners how to pursue opportunities with the state and by providing real-world experiences through apprenticeships, MoDOT benefits from an expanded pool of competitive vendors and increased numbers of skilled laborers.



INNOVATIVE CONTRACTING

INNOVATIVE PROCUREMENT

\$606 Million Redirected to Roads and Bridges

MoDOT uses Alternative Technical Concepts (ATC) to provide solutions that are equal or better than the original bid requirement. ATCs have been used on multiple projects since 2007. Looking to copy private-sector success, legislators authorized Design-Build project delivery. Concentrating on project goals, innovation, schedule and budget, construction is completed more efficiently, with less impact on travelers. Since 2010, Design-Build has redirected \$316 million and saved 39 lives. Before design plans and construction projects are completed, they are reviewed for money-saving methods and procedures. In 2021, these engineering reviews saved **\$7.2 million**.



STABILIZING RESOURCES

SHARED WORK

Saved \$14 Million in Total MoDOT Savings

With a drop in fuel tax revenue in FY2021, MoDOT took a number of steps to reduce its Personal Services spending. Working with the Department of Labor and Industrial Relations, MoDOT participated in the **Shared Work Program**. The program allowed employees to receive a portion of their unemployment benefits while being limited to working no more than 32 hours a week. Other employees had their salaries reduced by 5% without limitations to their work hours. The program allowed MoDOT to remain stable through times of uncertainty with little impact to Missouri citizens.

STABILITY

Focus on Bridges

Focus On Bridges Hits Major Milestones

Governor Parson's Focus on Bridges program saw several significant milestones in Fiscal Year 2021. By the end of June 2021 there were:

- 197 bridges under contract.
- 120 bridges completed in the program.
- 34 bridges under construction.

Last December, the program's 100th bridge opened in Livingston County on Route 190 over the Thompson River and another 20 were added before the end of the fiscal year.

This rapid climb in completion and contracting surpassed all earlier predictions. Focus on Bridges was an innovation that showed what could be achieved when the executive branch, the legislature and MoDOT work together to serve Missouri travelers.

Initially, \$50 million was appropriated from State General Revenue to replace or repair approximately 45 bridges in FY2020. In July 2019, Missouri received an \$81.2 million INFRA Grant from the U.S. Department of Transportation, facilitating the construction of a new I-70 Missouri River Bridge at Rocheport and I-70 climbing lanes at Mineola Hill in Montgomery County. The grant also leveraged a \$301 million bonding program, authorized by the legislature in the 2019 session, that will repair or replace an additional 215 bridges across the state - freeing up **\$301 million** from the current Statewide Transportation Improvement Program for new transportation improvement projects.



RESULTS

MANAGING ASSETS

TAKING CARE OF OUR SYSTEM

\$39.6 Million in Total MoDOT Savings

With 33,830 miles of state highway to manage, taking care of our signs and signals is a big challenge. By reassessing our road sign needs, modifying sign design and installations, converting signal and roadway lighting to LED, merging multiple software contracts into one and scrutinizing every aspect of traffic signal design and operation, **\$39.6 million** is sent back over time to take care of our system.

FINANCIAL SUCCESS

MISSOURI INVESTS IN RAIL CROSSING SAFETY

State, Federal and Local Funds Provide Program Stability

Missouri's Highway-Railroad Crossing Safety Program poured \$6.5 million into highway-rail grade crossing safety improvements in 2021. The program's mission is to improve highway-rail grade crossings throughout the state. It's funded by a combination of federal and state funds. The state Grade Crossing Safety Account is funded by a 25-cent assessment on all Missouri motor vehicle registrations or renewals authorized by Section 389.612, RSMO. This provided **\$1.2 million**, while federal funding from the Federal Highway Administration's Section 130 Program provided **\$6 million**. These funds can be spent only on improvements at public crossings for safety devices or the closure of a crossing. Railroads provided \$667,000 of private funds.

FINANCIAL STABILITY

FINANCIAL RESPONSIBILITY

\$1.6 Billion in Funding from Partners and ROW Leasing and Sales

Communities contribute to state highway projects to receive needed upgrades faster. If custom, decorative work is desired, those costs are also contributed. In the last 14 years, locals shared **\$1.5 billion** in additional local or federal funding to MoDOT projects and, by managing our right-of-way, put **\$69 million** to roads and bridges.

EMBRACING TECHNOLOGY

USING TECHNOLOGY TO DELIVER PROJECTS

\$31 Million in Total MoDOT Savings

Using Light Detection and Ranging (LiDAR) technology to streamline survey costs, LiDAR instruments are used to deliver needed topographical data to highway designers to create roadway plans. This method allows for safer, faster and more accurate collection of data on a large scale and is shown to be 56% less expensive than traditional aerial and land survey. Since implementing in 2007, this technology has saved taxpayers **\$10 million**. MoDOT has been a pioneer in embracing this technology and expanding the program each year, and won the 2018 and 2019 ACEC Engineering Excellence Grand award in partnership with their consultant.

RESULTS



DELIVERING RESULTS

We continue to complete projects on budget and on time.

State Fiscal Year 2021
440 projects completed

4.3% under budget
89% completed on time.

Over the last 10 years
4,300 projects worth
\$10.9 billion completed

6.4% (\$748 million) under budget
93% completed on time.

Improvements Made on Bridges

The Missouri Department of Transportation had a banner year in 2021 when it comes to overhauling the state's aging bridges. Three in particular — Buck O'Neil, Chester and Missouri River near Rocheport — play a vital role in inter- and intra-state travel and commerce.

Easily the highest profile bridge in the group is the Interstate 70 Missouri River Bridge near Rocheport. MoDOT solicited Statements of Qualification from interested parties in January 2021, narrowed the field to four in March and later selected the Lunda Team as the design-build contractor for the approximately \$240 million project, \$81.2 million of which came from an Infrastructure for Rebuilding America (INFRA) grant.

The new bridge will actually be two bridges, each supporting one direction of travel with three lanes. The bridge not only supports local economies, but national, too. This is how it became known as the linchpin of America. Every 48 hours, goods traveling to each of the lower 48 states passes over the bridge.

Construction is scheduled to be complete by the end of 2024.

In the Kansas City area, the Route 169 Buck O'Neil Bridge replacement project broke ground June 23, 2021. Massman-Clark, A Joint Venture was selected in February as the design-build contractor for the \$220 million project.

The bridge, which supports **50,000 vehicles daily**, connects communities north of the Missouri River to downtown Kansas City and major interstate routes. The existing bridge was built in 1956 and is nearing the end of its projected service life.

In the southeast, the Route 51 Chester Bridge Environmental Assessment was approved in March 2021. The multi-year study was an early milestone in the process to replace the nearly 80-year-old bridge that serves as a key connector over the Mississippi River in Perry County. It's the first bridge across the river south of Interstate 255 in the greater St. Louis area, a distance of 68 miles along I-55.

The estimated cost of the replacement project is \$189 million, a cost shared by Missouri and Illinois. The bridge carries 7,000 vehicles daily, 25% of which is commercial motor vehicle traffic. It was originally built in 1942 and reconstructed in 1944 after sustaining severe storm damage.

For More Information

ADDITIONAL INFORMATION

Citizens Guide to Transportation Funding in Missouri

www.modot.org/guidetotransportation/

TRACKER: Measures of Performance

www.modot.org/about/Tracker.htm

Appendices and Additional Documents

www.modot.org/Results/Documents.html

“Innovation is woven into MoDOT’s culture
and is embraced by our partners.”



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